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285 some warps become superfluous: these are cut off short. A cap of rawhide, soaked in water and stretched into shape before it sets, is sewed on the apex of the burden basket with a through and through stitch

Three strand twining[1] is commonly introduced on all types of baskets 285 for decorative purposes. The strand usually crosses two warps, giving 531 a much closer stitch than diagonal twine. Three strands crossing three and sometimes four warps are also used decoratively. There is no great regularity in inserting these stitches; crossing threes often lapsing into crossing fours, and vice versa. The majority of water bottles are made in three strand twine over two warps; the beginning seems to be always diagonal twine. Why water bottles are usually decorated with contrast twine stitches is a mystery, because the surface cannot be seen under the liberal coating of pitch! The last row in both trays and burden baskets is almost invariably three strand twining; this often extends to the last two rows, and occasionally to the last three or four rows of trays alone (possibly because their peripheries are much less than those of burden baskets).

To finish the edge of the water bottle, burden basket or tray, the 285 ends of the warps protruding beyond the woven fabric are first thinned by splitting, then bent to lie along the rim, and bound together with a coil stitch running around the rim. Split acacia or mesquite is used for this. The free ends of the two weft elements are included in this bundle of warps. A hoop of hard *amdvil'd* wood (which grows up the canyon, not near the village) about one cm. in diameter is bound on top of this rim in trays and burden basket with a coil stitch. Occasionally this extra hoop is omitted. Gaps are left in the binding of this hoop in some baskets: this has a certain degree of decorative effect.

Two loops to which the burden band is fastened are inserted in the burden basket and bottle. Each loop is fashioned of a thong which passes through the basket three, four, or five times. The loops on bottles are invariably horsehair, braided of two strands or bunches; those on baskets are said to have formerly been of the same material. The burden band was formerly made of soapweed. The longest leaves of this plant were dried until yellow, mashed between rocks, and soaked in water to remove the connective tissue. Three of these were braided into a band.

Trays intended to hold very fine seeds and parching trays are coated on the interior with the sticky connective tissue of mescal (or soapweed?) leaves. The leaves are crushed in the hands and rubbed over the basket.

[1] Some of this may be three strand braiding.

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285 of the knot (Fig. 14b). The succeeding stitches of the first coil are also sewed into the knot. The rods are now arranged so that two lie along the completed coil with the third on top and between them. The stitch in the succeeding coils is intended to pass under the third rod, but in most specimens it pierces this rod which the awl splits: it is said that this does not matter. Stitches are spaced to pass between those of the previous coil; not to split them. Stitching is usually fairly regular, but not fine. After two coils are in place the mashed ends of the rods which protrude at the center are trimmed off. Stitching is always from right to left; the left hand holding the free ends of the rods in place while the right manipulates the awl. The sewing strand is brought over the rod toward the sewer and through the coil away from her. The coiled tray, like the twined variety, is held with the finished interior face toward the sewer; stitching proceeding on the far edge.[1] In bowls the finished face is the outside of base and wall: stitching proceeds on the far side of the base, held bottom up, and on the near side of the wall while the bowl is held right side up. That is, viewed from the top or inside, the trays are coiled anti-clockwise and the bowls clockwise, but the direction of sewing is in both cases exactly the same. There would therefore be no technical difficulty in a woman turning a tray into a bowl, but since the hidden face is always left somewhat rough, the decision to make a bowl must be made as soon as the basket is begun.

Fig. 14 (30.2-1063, 1064). Manipulation of Initial Basketry Stitches. *a*, Beginning of twine stitch; *b*, Beginning of coil stitch.

The black decorative figures in coiled and twined wares are made 285 with the black outer layer of the seed pod of the martynia or devil's 531 claw (*halá'k*^{a}). Two varieties are used: one, with hooks 15 to 20 cm. long is indigenous. The second variety, with hooks 25 to 30 cm. long, [177] was introduced by Pagadjahuda, a Walapai woman who married into the tribe years ago, and who obtained the plant from her elder sister who in turn got it from the Paiute. Although the wild plants are also used, it is customary to plant martynia at the same time as corn. The pods

[114]

[1] Mason misinterprets his Plate 200, (h), also 427: the unfinished face is not the interior.

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285 direction in which the coils were sewn. The binder stitch pierces the top coil between two stitches, returns toward the worker over the rim, 531 and is inserted again between the second and third coil stitch beyond, thus alternating with the other binder strand. A second type of border is identical except that three strands are used (Fig. 15b). A third type (Fig. 15c–d) presents a braided appearance. In this case after the last coil was completed the three foundation rods were carried around for another row. The stitching on this is from right to left, working from the outside on the near wall of the bowl, that is in the direction in which the basket is coiled. A single binding strand is used in figure-eight fashion, the forward loop passing under all three rods and through the top coil, and the backward loop passing under the upper rod only; all stitches are diagonal. That is, the strand is brought down in front toward the left over all three rods, through the last coil, up to right in back, over the rim forward, down to right in front, through under the upper rod, up to left in back, and over the rim forward to repeat for the next stitch. The back loop crosses four forward loops.[1] Mason describes the same type of border stitch, but with only one lower rod and with the stitching from left to right.[2]

285 While the direction of weaving varies in these baskets, it has always the same motor basis, the actions of a right-handed weaver. At present there are no left-handed women whose peculiarity might affect the technique.[3] The direction of twine weaving is always from left to right, the active right hand ahead: that of coil weaving is from right to left, the active right hand following. Whether the coil is clockwise or anti-clockwise depends then on how the basket is held. In particular the change in direction on burden baskets, bottles, and coiled bowls results from the inversion of the fabric during the process. The resulting direc- [171] tion of the coil baskets agrees with that of other Southwestern tribes. These observations support Wissler's contention that tribal differentia [114] in direction are not based on physiological peculiarities, but are the subject of traditional habits. On the other hand, the apparent change in direction on a single basket suggests the necessity of a more refined analysis of types in determining their distribution. The desideratum is a record of the tribal hand positions.[4]

285 The decoration on Havasupai baskets is very simple. Twine baskets 531 are decorated by contrasting bands of diverse stitches. Usually bands of

[171] [1] This stitch is used as a method of fastening a Walapai basket in my possession, as well as one fro m the Aztec ruin and as a border of a bowl from the same place.
[2] Mason, (J. T., (b), 276, Fig. 87. Compare Matthews, (b), 208.
[3] There is one left-handed girl and one man.
[4] Wissler, (c), 494–501; Kroeber, (g), 49–51.

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plain twining alternate with wider bands of diagonal twining. Contrast is also obtained on the same baskets with three strand twining, since rows of this stitching are raised above the surface of the basket. The bands of three strand twine are uniformly very narrow; usually only one or two rows. Water bottles are commonly decorated in contrast twining, although they are subsequently pitch-coated to an extent which obliterates the decoration. I can see no other reason for this display of unfruitful energy than exuberant interest in utilizing a controlled technique and producing a pleasing effect for the moment. Only a very few are ever kept or traded without the pitch coating.

Designs (*tĕnyúdĭgd*, as so tattoo marks, face painting) are woven in twine and coil baskets with black martynia. These do not represent objects, and in fact, the women repudiated the idea that any meaning might be read into them.[1] There are no recognized design units nor design names: the women did not seem inclined to speculate about them. All the designs are extremely simple.

Twine trays are decorated with a single circular line, one row wide, or with the same line with short spurs, usually oblique, either on the inside or outside, resembling a cog-wheel with oblique teeth. The same series of teeth are used without the base line. Other decorations are a central circular area, filled solid; a horizontal zigzag line; or simple combinations of any of these. Burden baskets have one to three decorative bands around the upper third; using the same units (except the solid circle) and in addition a band of equilateral triangles, usually filled solid, and with basal angles in contact, or with bases or vertices touching a narrow line running around the basket. A band of two opposed dentate lines is frequent. Water bottles do not have design decorations.

One curious feature is a disinclination to decorate that part of the burden basket which will rest against the back and so will not be seen. The first, i.e., the lowest, band is usually carried around this portion as well, but subsequent bands are progressively executed with increasing carelessness or omitted entirely at this point. (Fig. 7.) This, of course, is contrary to the spirit which accounts for the decoration of water bottles in contrast twining.

A few baskets have the spurs of the dentate bands vertical, that is, following the warps. In all other cases observed, with one exception, the spur lies obliquely in the direction of twining, that is, with its lower end nearer the weaver's left hand and inclining upward to the right. Nearly all such designs are in diagonal twine. I think we have here a clear case of the influence of technique on design. In the first place, the

[1] This does not prevent them from providing interpretations for the tourist trade.

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531
[439]

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285 531 right hand of the weaver twisting the wefts turns outward on the wrist (which is perhaps easier than turning inward), carrying the forward strand away and down, and the back strand forward and up. With the stiff wefts that are in use, each stitch inclines upward to the right both in the diagonal and plain twining. But more important is the overlap produced in diagonal twine of the rear end of each stitch with the forward end of that in the row below. This results in a diaper effect running upward to the right. This in itself would suggest that when decoration is introduced, the diagonal lines should move forward in the direction of weaving. Furthermore, there is no continuous diagonal line toward the left, for these stitches are separated from one another by short intervals of bare warp. Of course, it is no more difficult to weave the diagonal lines running toward the left, but the effect is not so pleasing.[1]

[177] It is difficult to say how coil baskets were decorated, since most of them are made now to conform to tourist demands. One tray in use has a single horizontal band, for the most part one coil wide but the width of two coils at regular intervals. Short lines appear at other points. The trade baskets have in part the designs found on twine wares, with the addition of units copied from the products of other tribes seen at the stores. As with the twine baskets, there is very little attempt at design composition and diverse units are crowded on the same basket without regard for their appropriateness. According to the Indians, baskets with much decoration sell better than others, but this is quite contrary to their own feeling that those which are sparsely decorated are preferable.

The hoods of the cradleboards (Fig. 55) and the seed beaters (Fig. 3) are also basket work.

Pottery

323 413 [177] [178] Clay vessels, more often used in cooking than baskets, were displaced by metal products about 1870. The only native ware is a small, unslipped and undecorated, coarse, brown pot of the type common to all the nomadic tribes of the Southwest and adjacent sections of California (Fig. 16). The pot (*hamdi*) is globular, with a slightly constricted neck turning out in a lip (*ya'*, neck and lip?) sufficiently large to permit lifting with the finger tips. The size is reported as usually 30 cm. in greatest diameter 23 cm. in height, and 23 cm. across the mouth, but ranging down to a height of 22 cm. and a diameter of 12 cm. These lack handles or lugs.[2]

[1] See O. T. Mason's diagrams, (k), Figs. 19 and 20.

[2] Fig. 16 represents a vessel excavated at the Lagoons north of Pine Spring. It is of the type described, but it cannot be certainly ascribed to the Havasupai because of its somewhat greater size and handles.

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322 is then 3 to 5 cm. through. Shaping proceeds without waiting for the
411 pole to season. A good bow should bear a dark streak (medullary ray?) along its inner face, not on the back: such a bow will not easily break. The pole is cut to the proper length for a bow, six spans (thumb to middle finger), measured three toward each end from the middle. Some bows are only five spans. After the bark is removed, the pole is trimmed to the lines shown in Fig. 22, leaving the back in its natural state. Frequent sighting along the bow keeps the trimming symmetrical. The
[412] cutting is done with a stone knife and finally rubbed smooth with a grit-stone. The width at the grip should be that of two fingers (first and middle fingers lying flat); at the ends one finger wide. Its thickness is not measured. Fiber tension in the green bow gives a marked curve opposite to that when strung. The bow is set aside to season for a month: if it is strung sooner it is likely to acquire a permanent curve. When ready for stringing the nock is cut into the edge at a convenient point. There is no wrapping for a grip, nor are decorative marks or paint applied.

411 Oak is used as well as ash for sinew-backed bows (*mĕsmᵃ*, sinewed?):
322 it is grown in the same way. Mesquite is also used, if it contains a dark
237 streak. The bow resembles the self bow, but it is somewhat shorter, five spans, and only half as thick, although the width is the same. After seasoning for two months or more until it is thoroughly dry, it is ready for the sinew reinforcement. Nocks are first cut. The back is scraped as smooth as possible and fine lines are scratched on it longitudinally,
[412] using a stone flake with a serrated edge. After glue is applied over half the back, a broad sinew is laid on beginning at the middle, stretching it toward the tip. This is rubbed in the same direction with a smooth stick in order to make it adhere. The process is repeated for the other half of the bow, the sinew layers lapping at the middle. Three more layers are similarly added, setting the bow in the sun to dry partially before each application. The sinew extends over the back quite to the inner face. The first two layers are brought over each end and down the face for about 1 cm. The ends of the last two layers are left free, but twisted together. A sinew is bound in the nocks to hold the sinew backing fast. When dry, the grip is bound with a buckskin thong, centering slightly
[439] below the middle. Red cloth, obtained from the Hopi, is passed back
●[531] and forth longitudinally through this binding on the inside face, to produce a checkered effect. Red paint is used in default of cloth. The
411 sinew layers part from the wood when the bow is old. This is checked by
237 binding at intervals with sinew. This bow is always kept strung, al-

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been drilled. Straightness is determined by sighting. The arrows are next cut to proper length; for use with the self bow, from tip of forefinger to top of biceps; for the sinew-backed bow, from tip of middle finger to bottom of biceps. (This may apply to wooden arrows only). Reed arrows in the collection measure 75 to 76 cm., of which 15 cm. is foreshaft; willow arrows, 70 to 73 cm.; and boys' reed arrows, 72 to 77 cm. with 9to 12 cm. foreshafts. Willow shafts are trimmed with a knife—which like all knife movements is toward the body—and then rubbed between two grooved gritstones (*patamdlia*) of pumice held in the hand. The shaft is a true cylinder of the diameter of arrow reeds except for a slimmer section where the feathers will be bound and for a flare at the nock. The nock (*padjdtaûigd*) is next cut; in a reed arrow this comes just above a joint. The foreshaft for the reed arrow is also willow, trimmed to size, about 15 to 20 cm. long, and pointed at both ends. After this is painted red, it is glued into the pith channel of the reed. The end of the shaft is then wrapped for 2 to 3 cm. with sinew, fastened with glue, to prevent it splitting. Finally the foreshaft is split to receive the arrowhead, which is wet in the mouth, glued in, and tied on with sinew, which is not, however, glued (Fig. 24b). It is prayed to that it may stay tight. Many arrows, used for small game, have simply a sharpened foreshaft.

411 322 [412] [782]

Stone arrowheads range from 3 to 6 cm. in length; the smaller are placed on reed arrows, the larger on wooden shafts. These are triangular, with a deep, square notch in the base, and with the cutting edges reaching almost to the base. If an arrowhead tends to work loose, it is nicked well up the side to aid in retying. Stone heads were flaked on the heel of the hand with an antler tip cylinder. Bone or antler arrowheads are not used. Blunt points for stunning small game are not manufactured, but a corncob may be placed on the point of the foreshaft for this purpose.[1]

411 324 [321]

Willow arrows are often decorated with one to three zigzag or wavy grooves (*dpdcd'ui'ga*) running the length of the shaft, representing lightning (*vltal'djd*). These are made with a tool consisting of a wooden block with a groove across one face into which there protrudes the point of a knife thrust through from the back. The shaft is drawn through the groove, rocking it slightly, so that the point may trace a sinuous line.

411 531

The eagle and hawk furnish the best feathers for arrows, those of a smaller blue and gray hawk and possibly other birds are also used. Young

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[1] It is curious that the metal points that are made have the nerve of rounded shoulders where the tang joins the blade which occur in early trade examples found in eastern United States [171]

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231 eagles and hawks are captured in the nest and raised in captivity until
237 the plumes may be plucked. A shade is erected over a replica of the nest
417 in which the helpless bird is placed; when he grows he is tethered. Preferably a cage is built which resembles the frame of a sweatlodge but is somewhat higher. Brush is placed on top for shade. Cross sticks inside support a nest, on a level with which is a doorway for feeding.

237 Feathers are split beginning at the tip, and the narrower vane discarded. The shaft of the wider vane is scraped thin and trimmed. The
411 whole length of the plume is used; these are about 13 cm. long for reed
531 arrows, 23 cm. for willow. The shaft is decorated as shown (Fig. 25) before the vanes are placed; the bands are 1 cm. wide on reed arrows, 2 cm. on willow. Sometimes the whole distance covered by the vanes (or most of it) is colored red alone, and occasionally the entire shaft is painted red. This painting is purely decorative: these are not property

Fig. 25 (50.2-1222). Method of Feathering and Painting an Arrowshaft. The colors used are indicated as follows: heavy black, black; heavy stippling, green; light stippling, red.

411 marks, for a man could always recognise his own arrows. Glue is applied at the points where the vanes are to be bound on, and also over the paint, where it serves as a varnish. Sinew is chewed and drawn between the teeth until it is soft, when it is wrapped several times around the nock end by twirling the shaft. A few barbs at the tip of the first vane are caught under the wrapping, then a few of the second vane under the next turn, finally the third, and the wrapping is then completed. The vanes are carefully straightened and the quills of all three simply wrapped with sinew. The sinews are not tied, the glue holding them fast. The edge of the vane is next trimmed back toward the shaft so that it is broader at the tips than the butt,[1] except that the last few barbs at the butt and the down are left long. The ends of the barbs at the tip are cut off square to the shaft. Flight is retarded if the vanes are left broad. Three vanes are always used. Many arrows have one of the vanes in the plane of the nock, but this is not essential. Arrows twirl in flight, but the vanes are never placed spirally. Arrows are left in the sun to dry for

[1] This is not properly shown in the illustration.

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is a coat, split down the front, and lacks the front flap (Fig. 37). All seams are sewed with a running stitch; the two raw edges of adjacent parts which protrude on the outside are slit into fringes. Two pieces to be cut into long fringes are inserted in the seam under each sleeve. The only other decoration is on the triangular flap (*mukkaipéa*, collar tail). Some of these are beaded (*sogoúla*, beads), the design having no significance. Others have a narrow green line (using a copper ore) painted around the margin and all are fringed. Another type of shirt was even more definitely a poncho. A buckskin was folded in half, a slit cut for the head, the legs cut off and sleeves added, and slit down the front like a coat. 291 294 [531]

Warmer shirts are made of deerskins, tanned with the hair on, and worn with the hair side out.

The breechclout is a strip of buckskin or cotton cloth obtained from the Hopi,[1] about 30 cm. wide, and with short flaps hanging over the belt cord fore and aft.[2] These flaps are never decorated. Breechclouts are worn at all times, even with trousers, when the flaps hang inside. [439]

Trousers (*ógdl mikídl*, buckskin trousers) are patterned ultimately on early Spanish models; short waisted, knee length, and open at the knees. One type is cut from a doubled deerskin (Fig. 38); one of the duplicate pieces, the front, is then cut in two from waist to crotch. The seams are down the inside and outside of the leg; the waist is gathered somewhat; and a separate belt, 5 cm. wide, is added. This garment hangs just below the knee; the outer seams being open for a short distance along the leg. The trousers are open in front, failing to meet at the belt by about 10 cm., but this is covered by the breechclout. A second type has a triangular piece inserted in this space; this is then split. In this type the sewing of the outer seam is not continuous, and silver buttons are also added for decorative effect. [177]

Some men affect Navaho dress; the knee length leggings bound with woven ribbons, the broad belt with silver bosses, the silver studded wristlet, rings, and the turquoises and shell necklaces of the Pueblo and Navaho. 177 291 301

The woman's dress is really two aprons; that in front reaching from breast to ankles, that behind hanging from the waist. These are belted with a Hopi woven belt. The front piece resembles a butcher's apron; a deerskin is hung from the neck by a broad loop, with a thong holding it about the waist[3] (Fig. 39). The neck of the skin is turned 291 294 [439]

[1] Neither the cotton sometimes grown in the canyon nor mountain sheep wool are woven. [286]
[2] The Havasupai state that the Mohave use long flaps.
[3] Cushing, (a), 548.

[Text continues on p. 187]

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back on the breast in a broad decorated flap; the sides of the apron are fringed and the bottom slit into long fringes. Both the neck loop and waist thong are fastened permanently, so that the garment must be put on over the head. The woman's dress is made by the men. 291 294

The skin is worn flesh side out. It is laid flat on the ground and lines drawn with the aid of a bow, the back furnishing those for the curved bottom and the string the straight lines. Lines are marked with a wet stick or charcoal; formerly paint was used as well. The length of the dress is measured on the woman for whom it is intended, so that the breast flap may be turned down at the top of the sternum. The fringe on the breast flap consists of short broad tabs; the line delimiting them being heavily scored and wetted on the wrong side, otherwise, since the skin of the neck is thick, they do not swing freely. The fringes at the bottom are first cut in broad strips; these are drawn and cut parallel to the median line, not radially. Subsequently these strips are slit into narrow fringes while resting on a block of wood. The two at the ends however are not slit lengthwise, but their edges are cut obliquely in short fringes. Each edge of the apron is similarly cut into short oblique fringes. A neck loop, 2 cm. wide, is adjusted on the woman's person and sewed in place with a thong. The tab ends of this loop which hang over the breast flap are sometimes slit into strings on which short bone tubes or dewclaws are hung as rattles (*sdwôt*). On old women's dresses these jinglers include deer eyes (which lack special significance). They are prepared by cutting a tiny hole to drain the fluid within, blowing them up to dry, inserting a kernel of corn, and tying the aperture. Similar rattles are also threaded on the side fringes for a short distance down from the belt. The scored line on the breast flap is sometimes filled with paint; other ornamental lines are sometimes painted on it. The loops in the edges of the neck skin formed by the tanning pegs are also ornamental. A thong is tied between the forelegs of the skin to go in back of the waist. The outside of the garment then receives a liberal coating of red paint. One such dress took five hours to make. 291 294 301 531 [237]

The back piece is an apron hanging from waist to ankles. Like the front piece, the fringes at the bottom are long and those at the side short and cut obliquely. A long extension at each side of the waist line, cut from the length of the skin, serves as a tie-string. Two long horn-shaped pieces, with their edges serrated, are added at the middle of the waist line so as to fall down over the outside of the garment by way of decoration. The rear apron is put on before the front apron which then laps the back piece at each side. A buckskin belt of semilunar shape, slit in fringes 291 294 291

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woman's moccasin. This differs from the woman's type only in that the ankle piece is short. Two sets of tie strings are furnished in the older style of fastening as shown in Fig. 42; a short thong ties into a corresponding hole, a long thong is wrapped several times around the ankle before tying. The tops of moccasins were sometimes turned down inside to present a finished edge. Porcupine quill decoration (*gwawa tapé*) was then added in a band encircling the top about 1 cm. from the edge. The band was 1 to 2 cms. wide, the quills standing vertical, black, red, and green alternating. The quill (*gatŏlčnyamtd*: *gatŏta*, porcupine) was

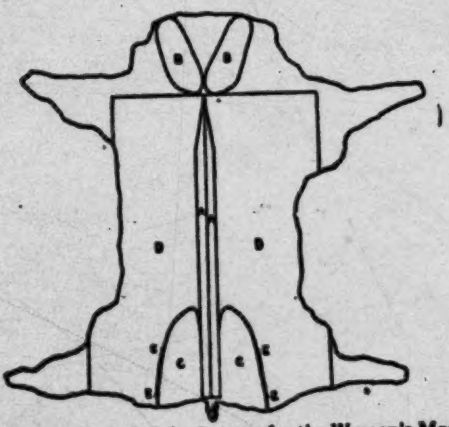

Fig. 44. Distribution of the Pattern for the Woman's Moccasin.

flattened before it was applied.[1] Men's moccasins were usually painted red, but there was no other decoration, appendages, etc.

The woman's moccasin (*pak'emahdnyŏ'*) has a two piece upper, a toe piece and tongue in one, and a long ankle flap.[2] This flap is worn wound around the ankle, not the calf as Pueblo women wear it. The single tie-string is wound over this and its loose end tucked under a fold. The pattern is distributed as shown in Fig. 44. The deer hide is folded lengthwise and split from tail to neck. Tie-strings (A), 2 to 3 cm. wide, are cut. The contour of the sole (B) is marked on the folded, thick neck skin but each sole is cut out separately. The toe and tongue piece (C') are marked on the next thickest part of the skin, the withers, using an old upper as a pattern. A leaf of narrow-leaf yucca is chewed into the edge of the sole,

[1] The method of coloring them is forgotten.
[2] This is in general the Hopi pattern described by Wissler, (a), 146.

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apron is always worn under the long garment. It seems probable that this is the original form of front apron perpetuated by the strong force of habit after the longer form was evolved. And it may be that the long garment was only infrequently worn, perhaps only in cold weather. An ornamental fringe worn in front as a belt looks like a further repetition of the apron idea.

Yavapai dress is identical. Two aprons are worn; a buckskin hung in front of the belt and another behind, and in winter

> a third one suspended from the neck by strings, and bound at the waist by a belt to protect the chest.

Even the decorations are alike; in both jinglers are put on the fringes, including bone tubes on the tabs of the neck straps.[1]

Powell illustrates a Kaibab woman's dress which is of the Plains variety, a long skin affair with a fringed yoke. Yet there appears to be a short fringed apron over this.[2]

The older Navaho dress is a more direct imitation of Plains costume in cloth. Two blankets, which hang well below the knees, are sewed together over the shoulders, sewn from the bottom to the waist, and belted with a woven girdle.[3] This may be taken to be an adaptation of the Pueblo woman's cloth dress to the Plains pattern.

The Mescalero and Western Apache women are credited with an upper garment which may be an approximation to the Plains dress or perhaps to the man's shirt. It "had an opening for the head and two large square portions which fell in front and behind to the hips." This may also be true of the Achomawi, Atsugewi, and Southern Diegueño, who wear a poncho garment like that of the men; the first two a skin slit for the head and sewn under the arms, the last a rabbitskin blanket.[4] The Klamath have both the long dress and the skirt of bark strings.

In addition to these two general types, there is the dress of the Pueblo women. This is a garment formed of a square of cloth folded lengthwise and sewed into a tube. This hangs under the left arm with two corners fastened over the right shoulder.[5]

A woven belt similar to that worn by Pueblo women is used by the Havasupai (who derive them from the Hopi) and by the Navaho, Pima, and Mohave.

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[1] Corbusier, 282.
[2] Powell, Fig. 44.
[3] Stephen, (b), 365f; Letherman, 209; illustrated by Matthews, (a), Pl. 34 and 36; Lipps, facing p. 48; James, (d), Fig. 130.
[4] Goddard, (c), 2nd ed., 151; Dixon, (a), 209-210; Spier, (c), 340.
[5] Hough, (a), 247.

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171 291 These specific comparisons show that Havasupai and Navaho alike have one pattern (No. 14) used by both sexes, which differs only in the length of the upper.

Moccasins in this area, like other articles of skin, are frequently [531] colored brown or red. Those of the Zuñi and Navaho are brown; those of Havasupai and Pima are red. In this they differ from the Southern Plains, where, if I recall correctly, the prevalent color is yellow.

Sandals may have occurred more generally in earlier times. They are known to have been in use among the Pueblos, in southern California, and in the regions to the south[1] through western South America. In our own day fiber sandals of identical pattern are made by Southern Diegueño and Shivwits, fiber sandals of undescribed types are made by Cocopa, Cahuilla and doubtless by their neighbors, and low slippers of tule by Paviotso, Achomawi, Atsugewi, Klamath, and Modoc. Sandals of hide are made by the Pima, Papago, Cocopa, Southern Diegueño, and Chemehuevi. Those of the Yuma are not described.[2]

Long fringed skin leggings of Plains type are worn by men throughout much the same area as the Plains shirt. Something of the sort was used by Wind River and Lemhi Shoshoni, Uintah Ute, Jicarilla (by implication), Taos, Picuris, Pecos, Mescalero, Mimbreños (?), Western Apache, Yavapai, Havasupai (?), Kaibab, Paviotso, Achomawi, and Atsugewi. The Navaho men, and the Havasupai in imitation of them, have a short legging reaching only as high as the knee. This distribution does not extend as far to the southwest as that of moccasins. There is less information about women's leggings, which in the Plains cover only the lower leg. Leggings are noted for Wind River and Lemhi (?) Shoshoni women, and Mimbreños. They were not used by the Paviotso nor the Havasupai. The footless knitted stocking worn by Pueblo women, as at Zuñi, may be a local adaptation. It also seems possible that the puttee-like women's moccasins of this area may be copies of the boot-like moccasins of the Southern Plains.

Overshoes worn over the moccasin when in snow are reported for the Walapai, Havasupai, Navaho, and Zuñi.[3]

171 281 286 291 Rabbitskin blankets are perhaps universal in the western plateaus, and used in California and throughout much of the northern part of the continent. My notes are somewhat random, but will help to define the distribution: Zuñi, Hopi, Navaho, Havasupai, Walapai, Mohave,[4]

[1] E. g., Hutchinson [Lumholtz, (a), Pl. I, II.]
Spier, (c), 344 f; Kroeber, (l), 61; Mason, O. T., (g), 362; Trippel, 363; Barrett, (a), 358; Chittenden, 304.

[2] Franciscan Fathers, 47, 308; Stephen, (a); 123; Mason, (l. T., (g), 405.

[3] The weaving of a rabbitskin blanket is illustrated by James, (d), Fig. 3, but according to Kroeber, these are obtained from the Paiute and Walapai, (k), 277.

1: Spier E-5 (1918) 1928
NT14 Plateau Yumans NT14
Havasupai

854 at one end. The weft consists of two or three slender twigs which are first passed together under alternate warps; each end is then brought back and passed under the other warps, and so on. The other ends of the warps are similarly bound side by side with sinews, and the ends of the hoop are then lapped and bound together. The hoop is tied to the frame

Fig. 55 (50.2-1216). A Cradleboard.

in the open space at the top and also to the upper cross sticks. Two stay cords extend from the center of the upper end of the frame to two points on the hoop.

Dewclaw rattles are sometimes fastened to the hoop. In modern [53] examples a string of beads, blue and white in alternate lengths, is tied back and forth diagonally on the periphery of the hoop. The baby's first

1:Spier E-5 (1918) 1928
NT14 Plateau Yumans NT14
Havasupai

The baby's first

854 [852] [827] thin hair is sometimes clipped off and tied in cloth in little bundles which are swung from the hoop. This is so that the hair will grow thick; if these were thrown away the hair would not grow. When the end of the [846] [732] umbilical cord drops off, it is similarly wrapped and hung on the hoop. If it is lost or thrown away the child will grow up idiotic. When at last the child can walk, the dry cord is ground to a powder which is smeared 856 longitudinally around his body from head to crotch and up the back to the head. This is done so that the cord will not be lost, i.e., it is returned to his body so that he will always have it. Mothers object somewhat to [531] selling these articles with the cradle. The ornamentation of the cradle does not differ for boy or girl.

262 853 The parents of infants must exercise a number of precautions. The new mother must eat only corn soup in order to have a free flow of milk. Corn or bean mush is far too mealy. Similarly salt will dry up the flow; for salt on the ground makes it hard. And if her husband eats meat the woman will be harmed just as though she had partaken. Although 262 mountain lion flesh is sometimes eaten, it cannot be eaten or even touched [753] by those who have babes in arms, for the latter will pine, their eyes sink in, their bellies ache, and diarrhoea ensues. This also applies to the flesh of a deer slain by a mountain lion. The parents of crawling children do [856] not kill snakes for fear that the child will resemble the snake, i.e., not be strong enough to walk at the proper time. Infants are not permitted to [753] eat salt; it would cause white sores on the tongue.

854 No special prayers are offered for the growth of a child, nor is any reason assigned for the growing process, it is so "just because the child suckles and eats." A fretful nursing infant is given an adult's finger to suck. Weaning is begun when the child can walk a few steps unsupported; 862 when it runs alone, the process is ended. During this period the child is given a little of everything others eat (and it includes a vast array of indigestible foods!) for there are no special foods for weaning.

Names

551 Havasupai names are freely used in address or reference: they have no special emotional or religious significance. They are even told to strangers without much hesitation. This seems to be a corollary both of their insignificant character, for they are mostly nicknames or meaningless words, and of their being labels casually given by others rather than names assumed. Undoubtedly this common use of names accounts in [601] part for the imperfect usage of relationship terms, to which I have referred. They do not like to name the dead, relatives or others, but their

3-James T-5 (ca.1900) 1903
NT14 Plateau Tumans NT14
Havasupai
Walapai

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A Wallapai Woman pounding Acorns.

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Chickapahgis's Wife, a Havasupai, parching Corn in Basket.

[Facing p. 210]

3-James T-5 (ca. 1900) 1903
NT14 Plateau Yumans NT14
Havasupai

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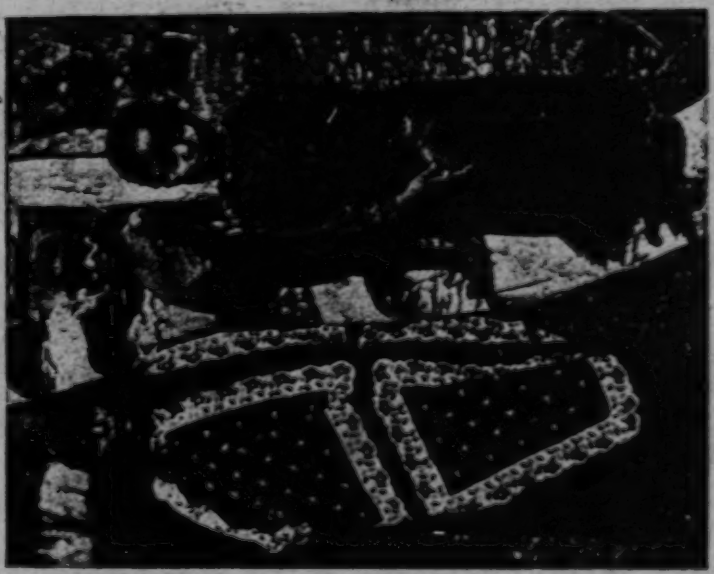

A Family Group of Havasupai.

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Havasupai Mother and Child.

[Facing p. 216]

3:James T-5 (ca. 1900) 1903
NT14 Plateau Yumans NT14
Havasupai

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LAGOMAR'S WIFE. A HAVASUPAI.

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WALUTHASCA'S DAUGHTER, WITH EDUWA, GOING FOR WATER.

[FACING p. 230]

may be used, but whichever one is chosen is used both for body paint and for face designs. However, one woman insisted that ocher paint only was used at the menses, and that the red opuntia dye was reserved as a treatment for sunburn and the removal of freckles. In the latter connection it was explained that freckles may be caused by a female fetus during pregnancy and can be remedied by the above treatment. (One informant thought that her fellow tribeswomen were in error in their belief that sex of a child could be foretold by the appearance of such freckles, inasmuch as she herself had seen them appear during a pregnancy which resulted in birth of a boy.) 881 302 [757] [827] [843] [842]

Designs on a girl's face may consist of four vertical lines on each side of her nose, extending from her forehead to her jaw, the innermost lines passing the outer corners of her eyes. Vertical lines may be painted on a girl's cheeks, with a continuous line extending from her hairline down her nose to her chin. One pattern started with a line at the inner corners of the eyes extending outward across the cheeks, the smoothing motion used in executing this supposedly warding off wrinkles. These, or other facial designs used, are said to have no significance other than that customarily associated with the number four which is conspicuous in any grouping of lines or dots used. The body may be painted red completely from neck to foot, or lines may be drawn on arms from shoulder to wrist and on the front of thighs to the knee. 881 302 531 [801]

While it was stated that a menstruating girl should rise before sunup for her ceremonial washing and painting so she will be ready to run at sunrise, a discrepancy appears in that she is said to dry her hair in the sun. This suggests that, in practice, little attention is paid to the time certain actions should be performed, or to their sequence. 881 302 841

Running at Sunset and Sundown

At sunrise, a pubescent girl, already bathed, shampooed, painted, and attired in her puberty dress, runs toward the sunrise, and at sundown she runs toward the west to insure that she will be quick and unfailing in her work. As she runs she carries a slow match of cedar bark with which she touches her knees and elbows to prevent rheumatism in old age. On the three succeeding days, a girl is bathed, her hair is shampooed, and her body paint and face designs are reapplied. As on the first day, she runs to the east at dawn and to the west at sundown. Following this routine she gathers a bundle of wood and carries it to the camp of some woman who is exemplary in working so that she may attain this ideal. 881 [751] [372] [482]

Meanwhile, a girl's father has dug a shallow pit and constructed a temporary brush shade over it a short distance from the home camp. In the pit, which is about 4 ft. long and 1 ft. deep, a layer of rocks is placed with firewood. After being heated about an hour, the rocks are covered with earth and several layers of blankets to make a bed. When the girl has performed 881 543

881 343 a few tasks for her mother, she retires to this bed, sitting or lying on it most of the time during four days and nights. The rocks stay hot overnight and are reheated each morning. At her mother's bidding, a girl rises frequently during the day to carry wood or water, or to do some other work so that she will not become a lazy wife.

881 887 869 In former times, an old woman, often a girl's grandmother, sat beside her throughout the night singing and talking to keep the girl awake. "Don't be lazy," the old woman admonished. "When you marry, work hard and be a good wife and mother." At present, a girl is permitted to sleep part of the night.

Taboos

881 262 [263] During this and subsequent menstrual periods, a girl refrains from eating meat, which would cause her face to wrinkle and her teeth to wear out prematurely. Although Spier (1928, 326) states that salt is not taboo, present informants say it must be used very sparingly. Otherwise, a girl while menstruating may eat much the same as usual, except that soft foods and liquids are preferable for her, and she should eat small amounts. Some foods considered appropriate in former times were corn mush, sllĕ (unidentified) mush, black sunflower seed paste, opuntia pears, and dried soapweed pears.

881 [237] [531] Scratching with the fingernails would leave raised marks or scars on the skin, so girls formerly used a deer tibia painted with red, black, and white designs, said to be without significance. Or she might make use of any stick close at hand. At the present time, sticks appear to be used exclusively. These are undecorated. In 1951, a Havasupai girl, while visiting an abandoned storage cist with this investigator, found a stick tucked into a crack under an overhanging rock. The stick, identified without prompting as a puberty scratching stick, was about 8 in. long, 1/2 in. wide, and 1/4 in. thick. It was undecorated and unsmoothed except for one slightly rounded end which probably had been abraded with a stone. The only stick observed in use, however, was any one which happened to be at hand.

[833] [842] [841] Sexual intercourse is prohibited during menstruation. As one informant phrased it, if this taboo is broken "you will be pregnant right there." Infraction would result in this penalty for either premarital or postmarital intercourse during menstruation, and for intercourse during the menstrual flow following childbirth.

[856] [826] If a girl at puberty is thin, a fat woman "stands on the girl's back" so she too will become attractively plump. In practice, a fat woman places one foot on a girl's back, exerting but little pressure. In one instance a girl's father is known to have performed this role.

302 are discovered on a child.

177 302 [531] Face painting described by Spier (1928, 194-6), and formerly executed with red, black, sienna, or white paint in designs composed of lines, dots, or both, is no longer practiced. While women now occasionally paint their faces, they use red ocher mixed with a cosmetic cream, which is blended lightly in a wide band across the cheeks and bridge of the nose, and may also be applied to the forehead. The use of commercial cosmetics has largely replaced face painting in the original manner. Lipstick is common, while rouge, various creams, lotion, and face powder are in less general use.

304 Face tattooing is no longer practiced, but young people sometimes tattoo their hands or arms, the most popular decoration being a set of initials, probably belonging to a sweetheart. These are small in size, and one person seldom wears more than one or two sets. An informant, in describing the tattooing process, stated that leaves of the mesquite tree are mashed on a metate, moistened with water, and mixed with charcoal to form a paste. Spier (1928, 197) mentions only the use of ground charcoal.

826 832 [578] [516] Traditionally, to be attractive, a woman should be plump in body, legs and arms. Fat legs are considered essential to beauty. Young men say of a girl, "Her body is fat enough, but look at her legs--they're skinny." Or a boy who wishes to insult a girl, tells her she has skinny legs. Women are careful to avoid sitting with their legs extended straight in front of them, because this position permits the calves to hang down and would cause the legs to become too thin. This position is particularly avoided following childbirth.

[177] In recent years, under influence of beauty standards of the white culture, a few of the younger Havasupai women wish to remain slender; although there appears to be little or no effort made to lose weight, some women are careful not to gain it.

846 292 A Havasupai woman customarily wears a broad Hopi belt, or a band of other material, following childbirth to support her abdomen until it returns to normal size. In earlier times a band 2 or 3 in. wide was woven from juniper bark. An informant remarked that the women of a neighboring tribe don't do this "and that's why their bellies look like rubber."

302 856 [177] In addition to observance of certain menstrual and childbirth taboos said to keep a woman youthful and attractive, a Havasupai woman should wash her face daily in cold water, rubbing the skin outward from the sides of the nose and upward on the neck, cheeks, and forehead, to prevent wrinkles. This routine is suspiciously reminiscent of advice given in movie magazines, which are popular with Havasupai women. However, an informant added: "I think this is true, because S----'s face is so smooth in her eighties, and she always did that. Your people don't know these things, and they start to

Decoration was kept to a minimum, almost always consisting of one, two, or three lines with solid triangles aligned against them, or rows of short parallel lines angling with the direction of weave. On one burden basket in use in 1950, ornamentation consisted of an encircling black line omitted on that portion of the basket which would lie against the bearer's back. Spier (1928, 127) notes that this was common practice. In coiled basketry for the tourist trade, more interest is taken in producing a pleasing decoration, but no distinctively Havasupai style has emerged. Three weavers are especially skillful in ornamentation, all of which is woven into the body of the basket with black strips from the seed pod of the devil's claw, the strips being sized to match the willows used in the remainder of the weaving. Designs usually are composed of small masses or lines of solid black. Animal or bird forms are occasionally represented, but geometric designs are more common. Ideas for designs are often original with the weaver rather than traditional in the tribe. One weaver imitated a four-leaf clover, creating a well balanced and pleasing effect. Another produced a spotty, poorly conceived design by scattering too many small images of birds and animals on the face of a tray. A young woman who decided to learn the weaving art consulted a book on Papago basket weaving to borrow designs. 285 531

Spier (1928, 155) notes, "The decorations on coiled baskets and twined burden baskets and trays of the Paviotso, Moapa, Yavapai, and Walapai bear definite resemblances to those of the Havasupai." [171]

Spier (1928, 128-38) gives a detailed description of techniques used in twining and coiling. Both processes also were observed and photographed by this investigator. Techniques used remain as Spier described them; and only additional observations will be recorded here. [114]

For twined baskets, twigs for the warp, or ribs, are prepared by merely stripping the leaves and leaving the bark. For weft, twigs are split into three strips starting at the small end by manipulating with the teeth and both hands. The pithy section of each weft strip is scraped off by drawing it at a right angle across the blade of a knife held parallel to the extended index finger. The bark is left on, and if a completed basket is examined closely, it may be seen that, in drying, the back separates from the woody part of the strip giving the finished basket the effect of being woven with double weft strips. Weft strips are woven with the woody surface of each strip turned to the interior of trays and to the exterior of burden baskets so that the side most often seen on the finished product is the light golden color of the wood while the reverse side is the darker brown or tan of the bark. The weaver works with the woody surface of the weft strips or the "right" side of the basket toward her; hence, she weaves a tray holding the interior surface toward her but turns a burden basket upside down with its exterior surface toward her. 285

THE HAVASUPAI

of the neck skin of the deer. The upper was a single piece of soft dressed skin, lapping at the outside of the foot, where it was fastened with a silver Navaho button. The woman's moccasin was a two-piece upper, a toe piece and a tongue in one, and long ankle flap which was worn around the ankle. The single tie string was wound over this and its loose end tucked under a fold. 291

Jewelry worn by the Havasupai is obtained in trade from the Navaho and Hopi or from the trader's stores at Grand Canyon. 301 437

Although the Havasupai relies mainly on his agricultural products, meat is a part of the diet the year round and especially during the winter. During the winter months rabbit drives are conducted by the men and boys. They drive in a straight course instead of drawing in a circle as several other tribes do. They claim their numbers are too few for a "surround". The rabbits are shot; never clubbed. Deer, antelope, mountain sheep, squirrels, and raccoons are also hunted. The hunt is still of economic importance as a supplementary source of food. Guns now are used in hunting instead of the traditional bow and arrow of former times. 262 284 [462] [177]

A man's work consists of house building or at least performing the heavy labor such as cutting and setting posts and beams, tending his fields, dressing hides, and looking after his range cattle and horses. 462

HANDICRAFTS

The Havasupai make basketry in two techniques, twining and coiling. Baskets are the most important domestic utensils and in each household may be found several burden baskets, food trays, and one or two water bottles. When not occupied with her other duties, the Havasupai woman is generally engaged in her craft. 285 315 [482] 462

The best material for making twined baskets is the acacia, generally gathered green. If gathered dry, or dried and stored, the twigs are either soaked in water or buried in wet soil two or three days before using. Cottonwood and willow are used. [324]

The leaves are stripped from the twigs by drawing them through the hand protected by a piece of cloth. The twigs are split in three parts, beginning at the tip, by using the teeth and both hands. Only the two outside strips are used, the inside being discarded. A knife is used to scrape the strips to uniform thickness. To begin weaving, two pairs of twigs are held so they cross at right angles at their midpoints. A weft strip is bound two or three times across the junction and the ends are woven alternately over and under the ribs. The weaving is in clock-wise direction, with the right side (the inside of parching trays and the outside of most other baskets) of the basket toward the weaver. After twining twice around the four ribs, another rib is inserted and caught into the twin stitch. The end of the twig is softened in water so that it can be drawn in tightly by the weft. The butt of the twig protrudes on the under side of the basket beyond the stitch by which it is held. As the weaving progresses new warps are inserted, always regularly spaced. As a rule baskets begin with diagonal twining, the weft crossing two warps at a time. Some begin with simple twining, the weft crossing single ribs, but soon change to diagonal weave. Diagonal twining is much more rapid. In either case the warps are inserted one at a time, but weft elements are twined in pairs, new strips are added singly.

To finish the edge of trays, burden baskets, or water bottles, the warp ends that protrude beyond the woven fabric are split and thinned, then bent to lie along the rim, and bound together with a stitch.

The burden baskets and water bottles are decorated with simple designs made by introducing different varieties of twining and with black from the Martynia or devil's claw. They have loops for carrying. The 285 415 531 [482]

285
[415 water bottles are first coated with soap-weed paste colored red, and
537] then with pinon gum to make them water tight.

The real artistry of Havasupai basketry is seen in the coiled trays and bowls, made of twigs of cottonwood or the three-leaved sumac. In shape they vary from round or oval plaques, nearly flat but with slightly upturned margins, to baskets or bowls of cylindrical proportions. The material is prepared at leisure and made into bundles and stored. The bark is scraped from the twigs, the wood split and scraped to uniform width. When desired for use, the materials are soaked in water to make them flexible. The sewing is on a three rod foundation. The ends of three twigs are tied in a knot. One end of the sewing element is pulled under one rod near the knot. The rods are started in a spiral and the binder stitched around them into the middle of the knot. The stitches following those of the first coil are sewed into the knot also. The coils are so arranged that two rods lie along the completed coil with the third on top and between them. The stitch in the succeeding coils is meant to pass under the third rod, but in most cases it pierces this rod which the awl splits. Stitches are evenly spaced to pass between those of the previous coil, not to pierce them. After two coils are in place the end of the rods that protrude at the center are clipped off. Sewing is always from right to left; the free ends of the rods are held in place with the left hand while the right plies the awl. The sewing element is brought over the rod toward the worker and through the coil away from her.

There are two or three methods of finishing the rim of coiled baskets. Usually they are finished by cutting off three rods successively so that the coils will taper to an end. Some baskets are finished with a diagonal over and over stitch with two strands.

531 Simple geometrical figures, animals, and banded designs are made in the black outer side using the outer layer of the seed pod of devil's claw. Most baskets are of white background with black decorations, however, the reverse is sometimes found with baskets of black devil's claw background and white designs.

854 The Havasupai cradle board is an oval frame across which small twigs are laid except at the rounded ends. The frame is made of green branches which are bent, tied and buried in damp soil to set in shape.
[207 The sticks that are laid across the frame are bound to it by a long strip of buckskin which passes once diagonally over the end of each cross stick. A piece of canvas or buckskin is laid along each side of the frame to cover the wrapping and is held in place by tie loops of buckskin, which are always four in number. Some cradles have carry-
[437 ing straps or a woven Hopi or Navaho belt may be used for the carrying strap, fastened to the frame about one-third of the distance from the top. A hoop of wicker is tied to the frame in the open space at the top and to the upper cross sticks. Two stay straps extend from the center of the upper end of the frame to two points on the hoop. A blanket is usually spread over the hoop to protect the baby's face from the sun and wind and to save him from injury should the cradle board fall.

SOCIAL ORGANIZATIONS AND CUSTOMS

594 The Havasupai family in our sense is the social unit. There is no
614 *clan* or *gentes* system, nor are there any indications that they ever ex-
602 isted. Individuals recognize their affiliations with their immediate relatives only; there are no other particular social or ceremonial groups.

The family groups are loosely bound into large ones by blood ties.
593 A group of sons reside in houses adjacent to the parent's home, together with the newly established families of the daughters of the house. The father and sons work their undivided fields with the assist-

7: Spier E.-5 (1918-1921) 1929
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If we are concerned with the manner in which traits are borrowed we have a simple, rather mechanical procedure at hand in the introduction of a superior variety of devil's claw which is used in basket ornamentation. This was introduced by a Walapai wife who procured it from a sister, who in turn got it from the Paiute. In such an instance we observe the ready adoption of an article of obvious superiority. More complex is the manner in which certain mourning rites and songs have been taken over from the Walapai. The Havasupai are accustomed to participate in the Walapai mourning ceremony, a rite known to them as of Mohave origin. It has, however, not taken root among the Havasupai with the exception of the songs and dance which are indulged in by younger individuals as a pastime. Yet this meets with resistance on the part of their elders because of the sentiment of the songs, references to the dead.

A host of similar observations may be made, which in my opinion tell us more of the manner of culture growth than a bald recital of generalized culture history. I wish to repeat that such historical reconstructions are misleading and unnecessary. In an earlier discussion of the Plains sun dance I attempted an historical reconstruction and an analysis of the conditions of diffusion and assimilation of its elements.[1] I would now candidly admit that the historical reconstruction of the development of this complex is perhaps unnecessary for understanding the nature of the processes of culture growth and perhaps misleading. It would seem that a more fertile view is rather to be had from a consideration of the conditions under which that growth takes place.

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[1] The Sun Dance of the Plains Indians: Its Development and Diffusion. Anthr. Pap., Am. Mus. Nat. Hist., 16, pt 7., 1921.

194 The grammatic structure of their language, though inferior to that of the Zuñis, is nevertheless quite regular. Intonation, as with the Chinese, repetition, as with the natives of Australia, are employed to vary the shades of meaning in words. Most of the consonants not occurring in other Indian tongues are common in the Ha-va-su-paí, which is strikingly soft and rapid. Just as the music of the Zuñis has caught the spirit of the desert winds, so have both the music and the language of the Ha-va-su-paí been infused with the sounds of the rushing waters by which they are surrounded. As I listened to the weird song of a doctor, one night, it seemed more like the echoes of water in a cavern, or in resounding nooks of the deep cañon, than like the music of a human being.

It is, indeed, an interesting question how far man's environments, climatic, physical, even biologic, have influenced the sound of his music and language. Possibly of the same family of Indians as the Zuñis, there are, nevertheless, elements of sound in the music and words of the Ha-va-su-paí unpronounceable by the Zuñi, never heard in his music. On the other hand, the music of the Hua-la-pai, on the plains to the westward, the undoubted fathers of the Ha-va-su-paí, is as strangely different from that of the latter as is the Zuñi itself, and as strangely in keeping with the wild, dry, forest-clad hills and valleys of his native land.

● 531 Possessing nothing but a rude architecture, their art is correspondingly crude, being mostly confined to the patterns on their basket-work and the paintings on their bows and arrows. [285] The basket-work, by virtue of the regular arrangement of the splints, is often beautiful. But few people live, however, whose appreciation of art seems so great, compared with their limited practice of it.

535 They are mimics, but their dances —

[P. 556B]